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IMAGINARY MUSEUMS, COMPUTATIONALITY & THE NEW AESTHETIC

CHAPTER ONE

INTRODUCTION

ONCE WE KNOW THAT THE VERY ESSENCE OF CREATION IS A BREAK WITH THE PAST, ART LINKS UP WITH HISTORY, SO TO SPEAK, IN REVERSE.

The notion of the glitch, as a technical artifact, whether accidental, system-generated, pragmatically or aesthetically created, contains within it a framework for thinking through the digital, or as we would prefer, the computational. More specifically, the glitch is an exceptional way of reflecting on key aspects of the new aesthetic as a moment within a computational society, or what Vilém Flusser once called a post-historical age where we recognize ourselves not as subjects, but projects bound up in the structure of algorithms and theorems designed out of ourselves (2004: 90). In many ways the new aesthetic has served as a lightning rod for general recognition that our computational way of thinking is (finally) having a major influence on socialities, work and life itself. Indeed, the capacities of calculative systems and devices to use context to present the user with predictive media and information in real-time, sometimes to startling effect, has become a normative experience of living in a computationally augmented everyday. We would even go further and suggest that computation itself has become an important set of conceptual, theoretical, aesthetic, and practice-based styles of life today, such that we live in a historical constellation of intelligibility defined by computationality. But that is getting ahead of ourselves.

The new aesthetic, as is now widely known, was initiated as the 'New Aesthetic project' in early 2011 through a Tumblr blog started by James Bridle, a UK based designer/artist/programmer

working in the creative industries. He declared his ambition as "collecting images and things that seem to approach a new aesthetic of the future", which mainly took place by posting 'found' images from across the Internet (Bridle 2011). Tumblr archives imagery – it is a noticeably visual platform – and highlights digital processing from multiple perspectives (see Berry et al 2012). FIG.1

This nascent New Aesthetic was subsequently presented at South By Southwest (SXSW) in a panel Bridle organized. The presentation was structured in particular around the notion of machinic vision, as the abstract for the event stated,

> We are becoming acquainted with new ways of seeing: the Gods-eye view of satellites, the Kinect's inside-out sense of the living room, the elevated car-sight of Google Street View, the facial obsessions of CCTV... As a result, these new styles and senses recur in our art, our designs, and our products. The pixelation of low-resolution images, the rough yet distinct edges of 3D printing, the shifting layers of digital maps. In this session, the participants will give examples of these effects, products and artworks, and discuss the ways in which ways of seeing are increasingly transforming ways of making and doing (SXSW, 2012).

In the audience was the science fiction author Bruce Sterling, who wrote a short essay for his Wired blog, *Beyond the Beyond*, reflecting on the idea, in some senses mapping out its contours and possibilities (Sterling 2012). Shortly after being published, this post rapidly circulated around the world, generating significant controversy and a great deal of discussion from a number of commentators. The contestation created in this storm of attention around the new aesthetic has been extremely revealing, both in the terms of reservations from media arts contexts, but also with more fascinating recognition by a wider public that the concept of the new aesthetic identified something interesting.

It is this something that we want to discuss here, to tease out how the new aesthetic has given us a useful register to talk more generally about computationality, especially in terms of the

post-humanist claims surrounding the idea, along with questions of contemporary cultural production, materialist politics and critical thinking. Put another way, the new aesthetic has given us one possible grammar for identifying and critiquing the digital, but also for recognizing an emergent regime of computational sense-making – an issue that we want to explore in this text. To be clear, our aim is not to become the defenders of the new aesthetic, or to accept it as defined by the creative industries themselves. Rather, we want to think through the spaces opened up by this concept far beyond the initial 'mood- boarding' techniques that gave rise to Bridle's formulation. Somewhat tellingly, criticism of the new aesthetic often goes no further than declaring that the new aesthetic is neither 'new' nor 'aesthetic', which only serves to close down discussion before it has even started.

Thus we explore computational sense-making as machines process, format, organize and understand the world, especially as this is entangled with competing notions of (post)humanism. We investigate, moreover, how these settings encourage modes of archiving and representing connected to informational accumulation and security apparatuses. In other words, we aim to unpack these ideas as a practice of assembling which is shaped by computational means, and also how this implies the elaboration of a new aesthetic regime.

Perhaps surprisingly, the notion of The Imaginary Museum first proposed by André Malraux in the late 1940s and early 1950s assists with establishing the terms of our discussion. Archivization and collecting is comprehended in this schema as transformative in onto-epistemological terms. That is, as Barbara Eldredge writes, "taking an object out of its original context and placing it in a museum fundamentally changes the very nature of the object, changes its purpose from utilitarian to aesthetic... In this way, a table created for utilitarian purposes or a religious icon created to access the sublime are transformed into aesthetic objects, what Malraux calls style" (Eldredge 2012). There is, likewise, a strong medial aspect to Malraux's understanding of these processes, especially as photography becomes a medium that allowed for technical diagramming of semblances and affinities,

> Malraux argues that his collection of reproductions performs the same transformative function but better. Photographs or art are not bound by the limitations of physical display. Exhibiting pictures of artworks is infinitely easier to access/transport/display/juxtapose than the artworks themselves. In an instant, one can place a picture of The Sphinx beside a picture of the Eiffel Tower (Eldredge 2012).

From our perspective, the notion of the imaginary museum might itself be productively thought in relation to the new aesthetic for two reasons. Firstly, it invites discussion of the new aesthetic through one of the frameworks that animates transmediale 2013, and which we also believe is an interesting framework in terms of computational systems. Secondly, it allows us to ask the question of what the Imaginary Museum imagines, and what this can tell us about the collection, curation and archivization of cultural content today through new media. Indeed, aspects of elitism, popular culture, technical storage, analytics and reproduction that inform the imaginary museum are also fully present in the new aesthetic. In Malraux's terms, we might wonder whether we are similarly witnesses of a consistent or 'grand style,' certainly in relation to a dominant trend for all things posthuman.

There have, however, been previous attempts to think through the imaginary museum in terms of the computational. For example, in the 1980s Harold McWhinnie expanded on Malraux's idea through the notion of an 'instant museum' enabled by digital technologies. He created prototypes of three such 'museums' on floppy disks, but the full unrealized proposal included a distributed bulletin board that extended to locations in outer space, so that "works of art would be stored in an information retrieval system and could be beamed back and forth to the museum spectator both on earth, or under it in an art museum, and on other space stations as well" (cited in Prince 1988: 88). Despite seeming outlandish, electronic imaginary museums are arguably no longer hypothetical propositions, but fully enabled through the database technologies that form computationality.

In this respect, we can examine the concept of the imagined

museum – drawing links with the function of the imaginary linked to the notion of imagined community theorized by Benedict Anderson (2006) or Wendy Hui Kyong Chun's imaginary networks. As Darzin (1957) argues:

> The imaginary museum is an essentially modern thing: brought forth by the improvements in methods of reproduction and by the development of color photography, it has helped to familiarize the modern public with works of different periods and cultures. The exemplary works thus forfeit their high rank and are integrated in the community of minor works. Paintings, sketches, sculptures, ceramics are detached from their surroundings and thrust into a realm where they can lead an autonomous existence, unhampered by the laws of time and space (Darzins 1957: 107).

Speculation of an imaginary museum of culture also drives technological dreams of comprehensive digital collections – sometimes referred to as an infinite archive. The accumulative and curatorial nature of the new aesthetic has obvious links with this notion of registering and recording technical artifacts. It resonates, moreover, with how the Platonic dream of a new 'cyberspace' and has informed the imaginaries of Internet technologists. As Erik Davis put it, "the animating archetype of the information economy, its psychological spunk, lies in a gnostic flight from heaviness and torpor of the material earth, a transition from the laboring body into a symbol processing mind" (1999: 115). Others have also noted this characteristic in Malraux's notion; for example, Sypher observes, "in fact, there is something almost Platonic about the [imaginary] museum that sets Heraclitean Change over against the Eleatic Permanence of an Art" (1985: 149).

Indeed, having considered the possibilities opened up by photographic reproduction, Malraux conceives of this milieu as both singular and somehow 'without walls' in contrast with the 'real' museums. He writes:

> Hitherto the connoisseur duly visited the Louvre and some

> subsidiary galleries, and memorized what he saw as best he could. We, however, have far more great works available to refresh our memories than those which even the greatest of museums could bring together. For a 'Museum without Walls' is coming into being, and (now that the plastic arts have invented their own printing-press) it will carry infinitely farther that revelation of the world of art, limited perforce, which the 'real' museums offer us within their walls (Malraux 1978: 16).

Nevertheless, the affordances of this imaginary museum are the systems of photographic reproduction available to Malraux in the 1940's. This is essentially a question of media abstraction. Similarly the new aesthetic must be thought through historically, critically and materially, and its site in the computational culture we now experience reflects the contemporary problems raised by widespread adoption of general purpose computing (Berry et al 2012). Our mobile phones, televisions, the trains, cars and aircraft in which we travel, the health technologies, drug development, neonatal care, educational systems, and indeed our consumption practices are now informational commodities and practices structured through and by computation.

But computation is not a closed system, and it remains open to contestation and experimentation, aesthetic practice, critique and a politics of the technical, through hacking and cracking. In this spirit, therefore, we want to analyze the calculative arrangements of the imaginary museum, to patch its internal logics, and, in some sense, to follow *The Critical Engineering Manifesto*'s call to challenge and transform the systems upon which it is based (Oliver, Savi i and Vasiliev 2011). The new aesthetic – in some senses, a collective mapping of infrastructural breakages, faults, failures, glitches and breakdowns – draws attention to how memory, perception, sense and control are expropriated through an informational capitalism that now focuses on us, as human subjects who also require error-correction and the space for graceful failures (The Royal Society 2012). So let us turn to the question of the imaginary museum and the issues it raises in a time of infinite archives, database technologies, and real-time streams.

CHAPTER TWO

THE LIMITS OF THE IMAGINARY MUSEUM

What does it mean to explore Malraux's notion of the imaginary museum *(musée imaginaire)* in relation to the problematics of computationality? Malraux first articulated the concept out of a Romantic understanding of art in publications like The Psychology of Art *(La psychologie de l'art)* (1947-50), The Voices of Silence *(Les voix du silence)* (1953) and Imaginary Museum of the Sculpture of the World *(La musée imaginaire de la sculpture mondiale)* (vol. 1-3, 1952-54). Defined as the "art of [the] imaginary", it was connected to historical questions of the beautiful and particular understandings of artistic practice as human will against 'Fate.' So for Malraux, "Art is anti-fate" (Malraux 1978: 6) to the extent that an artist's work is a continuous fight against 'Time' and 'Death' – accordingly, art is the terrain where human beings can triumph in an eternal war.

Malraux wrote at a time when photography was conceived as a revolutionary technology of reproduction that enabled high definition images to be taken of works of art. These photographic reproductions flattened sculpture, painting, and other mediums to the dimensions of photograph paper. But for Malraux this transformation of the artwork opened new possibilities for viewing, curating, juxtaposing and assembling works. Nevertheless, he remained extremely critical of art books, which he believed reduced artworks to a set size, position and perspective, and locked them into a certain kind of reception. By contrast, he perceived the imaginary museum as capable of containing technical reproductions of all sizes and shapes; he emphasized the ability of supplementary photography to offer different visual enhancements of detail in works, which enabled new readings and attention to the detail of art. So the imaginary museum was not necessarily limited in scale or scope, although today we might be attentive to the limitations of photography in terms of cost, materiality and so forth.

Thus, Malraux's imaginary museum was potentially a universal repository for art – containing the common heritage of humankind – reified in various artifacts, from the cult objects of ancient cultures to the canonical masterpieces of Western art. Interestingly, despite being widely referred to as the imaginary museum, *musée imaginaire* was first translated into English as the 'Museum Without Walls.' For Rosalind Krauss, this semantic shift in translation signals "the English language's appetite for demonstration, for the concrete instance, for the visualizable example – for the image" (Krauss 2005: 241). The replacement unfortunately eliminates the original conceptual underpinnings of *musée imaginaire*, Krauss argues, since "in French, Malraux's master conceit addresses the purely conceptual space of the human faculties: imagination, cognition, judgment; Englished, it speaks instead to a place rendered physical, a space we might walk through, even though a museum without walls, being something of a paradox, will be traversed with difficulty" (Krauss 2005: 241). This paradoxical characteristic of Malraux's concept is also found in contemporary discussions of the digital and, more specifically, the new aesthetic. FIG.2

The 'spatial' translation of *musée imaginaire* as the Museum Without Walls, however, stresses the strong medial aspect of Malraux's concept. Devices to support technical imaging, especially by photographic means, were important tools for Malraux. The influence of reproducibility on art, in particular, was another central concern of his work. In contrast to Walter Benjamin, Malraux's agenda was not to problematize the 'decay of aura,' but rather, with the help of photography, to return some form of the auratic to other products of human creativity and our understanding of world art (Didi-Huberman 2012).

The *musée imaginaire* can, therefore, be deployed in contradictory ways, depending on how it is translated and understood. Nonetheless, it is also interesting to suspend a definitive explanation of the term, especially as it ultimately remains entangled with the imagination and the materiality of the photographic image. The seduction of the idea within art theoretical discourse and wider publics itself raises curious questions in this respect. Regardless of Malraux's texts, the imaginary museum provides the reader with a potentially

immense interpretative space limited only by one's own imagination. We do not have space here to delve deeper into the difficulties of translation that this reveals, but want to keep this complexity in the concept operating throughout our text as a productive tension.

Accordingly, the imaginary museum, in part due to its accentuated medial aspect, provokes diverse interpretations as a 'prototype' for an emergent kind of imaginary museum in the age of computational reproduction. Indeed, it is easy to envision an infinite archive of digital images on the Internet as a present day version. But precisely these aspects make the use of the 'imaginary museum' concept in relation to digital culture quite problematic. As Krauss argues:

> The recycling of the past which is the function of the ragpicker has become that, as well, of the artist – pasticheur. That has been the fate of the *musée imaginaire* in our time. Malraux's beautiful art book with its wonderful color plates and its elegantly photographed fragments, yielding their delicious 'fictions', has become the vastly expanded art library into which the contemporary artist goes on his raids. And the *musée imaginaire*, turned into a field of serendipitous exploration, has not only become a vast used-book store, but perhaps even more accurate to the nature of the exchange that takes place, a flea-market (Krauss 2005: 244-245).

In many ways, Krauss' discussion recalls the discussion between Benjamin and Theodor Adorno on how to interpret the figure of the ragpicker in nineteenth-century Parisian culture. In his text on Baudelaire, Benjamin turned the marginalized figure of the ragpicker as a social outsider into a symbol of the artist in capitalist society. In response, with his habitual disillusionment, Adorno critiqued Benjamin's romanticization of both the artist and the ragpicker as a failure to understand these figures in their true social functions. For Adorno,

> Benjamin simply ignored the capitalist function of the ragpicker "to subject even rubbish to exchange value" (Adorno 1973: 71).

Of course, the promise of unlimited access to a universe of images through digital and networked technologies can also too often be easily celebrated as a radically democratic process. It is claimed that the resulting challenge to institutional authorities and cultural gatekeepers allegedly destroys the elitist role of the traditional museum. The digital imaginary museum in its 'updated' form, moreover, then turns into an operationalized model, which we argue reflects informationalism in cultural production. This new imaginary museum is claimed to blur the borders between art as institution and visual culture as a whole, dramatically changing its role and function in society, while ignoring crucial questions of power and economics.

As Marx proclaimed in his early writings, the political economy of leisure has replaced that of work; or rather, as today's critics of cognitive capitalism and governmental practices of self-exploitation would put it, the very border between the political economy of leisure and work is enmeshed or blurred. Here, the capitalist function of digital 'ragpicking', as it were, as a cultural practice is not, as in Baudelaire's time 'to subject even rubbish to exchange value,' but the opposite, to subject exchange value to a terrain of creative destruction. This argument, therefore, can be extended far beyond conventional borders of the self-referential contemporary art world. The wish to apply the imaginary museum, or in this case, the metaphor of the imaginary museum, to Internet platforms, databases, Tumblr, and so forth, becomes highly complex in conditions of informational capitalism. Indeed, we need to think of the imaginary museum carefully by connecting it to the wider power dynamics of computational affordances and informational regimes of accumulation. Ragpickers and flea-markets may have changed their modes of existence and forms of appearance, but they have kept their function. Recycling the past, following the path of dromology – as a need for accelerated life – has turned into an intensified inception of the future (Coley and Lockwood, 2012). FIG.3

There is a danger, accordingly, that digital 'flea-markets' are conceptualized as imaginary museums, while physical museums become the flea market for the Cloud. The creative industries,

meanwhile, celebrate themselves as subversive revolutionaries, at the same time as generating exchange value within this 'new' cultural economy. Here, cultural constructions of the new require not only a notion of the 'Old,' but also the constant circulation of newness as an intellectual ferment in the continual re-adjustment to treading topics. This cultural logic is insightfully addressed by Boris Groys in his text *Über das Neue. Versuch einer Kulturökonomie* (1992) which aims to and 'proves the theorem' that in art and culture the new as such does not exist. Rather, we continually deal with a contextual displacement of cultural phenomena and their ongoing re-evaluation, in a mode comparable to Nietzsche's 'transvaluation of values' (Nietzsche 2008). The construction of the new implies a particular hierarchy of values enabled by the "Cultural Archive as opposed to the Profane Space" *(kulturelles Archiv versus profaner Raum)*, as Groys puts it. This Cultural Archive can be taken as the materialized memory of a society in which all the valuable cultural objects are preserved. It consists of libraries, museums, institutes, and other public organizations that support new media.

A continuous transfer of certain phenomena from the 'profane space' of digital folklore and grass-roots creativity into cultural archives is accompanied by a counter-transfer of appropriate models of conceptualization and the invention of new classifications, which provides innovative contexts for circulation in variegated informational economies. This perpetually refilled cultural archive is full of recombinant ideas and theories, which wait in the wings to legitimate the further extension of archivalization through computationality. This is exactly how we can apply the model from Groys, since despite these claims to new cultural forms, the structures and mechanisms brought about by new cultural economics continue to function in accordance with a particular logic of accumulation and power. They provide the material grounds for establishing computational memory industries.

Consequently, we should ask, why even describe platforms like Tumblr.com in terms of the imaginary museum? Are they a special kind of ethnographic museum of digital folklore, containing a random collection of media artifacts – texts, images, audible objects and so forth? And how useful is it as an explanatory form?

CHAPTER 3

Does this gesture of defining certain phenomena as museums point to a latent investment in so-called high cultural institutions, but now masquerading under a particular call for democratisation? Is it simply an attempt to validate certain cultural practices and artifacts as subjects of study? Indeed, with these questions in mind, we now turn to a discussion of computationality, mnemotechnics and the political economy of informational capitalism.

CHAPTER THREE

THE (UN)PROBLEMATIC OF THE MEMORY INDUSTRIES

The digital technical system is a global network of devices, practices and processes that have an underlying computational structure. We referred earlier to the emergence of a new historical constellation of intelligibility called computationality, which we use to identify this new mode of development. Within such a system, new methods of 'writing' and 'reading' are emerging which stand against, if not reconfigure, the Enlightenment reliance on literary practices. Here, we are thinking of practices that are broadly understood as 'computational thinking,' but which include, beyond reading and writing practices as commonly defined, programming, digital media skills, algorithmic thinking, digital methods and cultural analytics. This also connects to issues of cognitive enhancement and posthumanism, which consider means "to raise [human] function to a level considered to be 'beyond the norm' for humans" (The Royal Society 2012) and to notions of Humanity 2.0 (Fuller 2011).

To quote the collaboratively authored V2_ text, *New Aesthetic, New Anxieties:*

> Computationality is a central, effective, dominant system of meanings and values that are abstract but also organizing and lived... It is related to a whole operative body of computational practices and expectations, for example how we assign energy towards particular projects and how we ordinarily understand the 'nature' of humans and the world. The meanings and values that it sets up are experienced as practices which are reciprocally confirming, repeated and predictable, at the same time as being used to describe and understand the world itself (Berry et al 2012: 31).

Computationality creates a new historical 'epoch' or ontotheology.

In other words, software is the paradigmatic case of computationality, and presents us with a research object that is located at all major junctures of modern society. It is, therefore, unique in enabling a comprehension of the present situation – as a collection, network or assemblage of 'coded objects' or 'code objects.'

Computationality, moreover, is distinct from the 'challenging-forth' of technicity as Martin Heidegger described it – by contrast, computationality has a mode of revealing that we might call a 'streaming-forth.' One consequence of this streaming-forth is the generation of second-order information and data to maintain a world which is itself perceived and sensed as flow, but drawn from a universe which is increasingly understood as object-oriented and discrete. Though rippling with its own set of superlatives, Malraux's imaginary museum provides one counter-intuitive way to consider the mobilization of the past through these modes of computation. As revealed by the flattening effect of photographic media, for Malraux, humanity's 'great accomplishments' are subsumed by the imaginary museum into a generalized historic flux:

> It is as though an unseen presence, the spirit of art, were urging all on the same quest, from miniature to picture, from fresco to stained-glass window, and then, at certain moments, it abruptly indicated a new line of advance, parallel or abruptly divergent... Nothing conveys more vividly and compellingly the notion of a destiny shaping human ends than do the great styles, whose evolutions and transformations seem like long scars that Fate has left, in passing, on the face of the earth (Malraux 1978: 48).

Here, we might now consider the operations of real-time streams, trajectories and informational vectors as they transform collective sense and perception, experience and aesthetics. While Malraux would reflect on the rapid expansion of photographic media technologies, our networked present subsumes all manner of past activities and prefigures potential variations in new ways. Similarly, weird curtailed temporalities arise from these commercial processes, as Geert Lovink provocatively claims, "forget the browser; real-time is the new crack... Much like finance, the media industry

is forced to maximize surplus value by exploiting miniseconds. The industry can only return profits by utilizing the colonization of these streams on a planetary scale and in a distributed fashion" (2011: 11).

At a fundamentally abstract level, all computation involves the processing of streams. The latter refers to a sequence of "data elements made available over time. A stream can be thought of as a conveyor belt that allows items to be processed one at a time rather than in large batches" (Wikipedia 2012). However, in managing these streams, computational devices are unique for appearing to oscillate rapidly between *Vorhandenheit/Zuhandenheit* (present-at-hand/ready-to-hand) – a glitch ontology (Berry 2012b). Or perhaps better, constantly becoming ready-to-hand/unready-to-hand in quick alternation as a way of handling of exceptions. And by quick, we mean this can occur in microseconds, milliseconds or seconds, repeatedly in rapid succession. This aspect of breakdown has been acknowledged as an issue within human-computer design and is accepted as one of pressing concern to be 'fixed,' handled properly and, ultimately, made invisible to the computational device user (Winograd and Flores 1987).  FIG.4

Oscillations create the glitch as a state of computational exception, as opposed to other technical forms. This is the problem that generates a conspicuousness that breaks the everyday experience of things, and more importantly, it breaks the flow of things being comfortably at hand. It is a form Heidegger called unreadiness-to-hand *(Unzuhandenheit)*. In fact, Heidegger defined three forms of unreadiness-to-hand: Obtrusiveness *(Aufdringlichkeit)*, Obstinacy *(Aufsässigkeit)*, and Conspicuousness *(Auffälligkeit)*, where the first two are non-functioning equipment and the latter is equipment that is not functioning at its best (see Heidegger 1978, fn 1). In other words, if computational equipment breaks down, you have to think about it in a specific way in relation to your activity. Glitches, as we will go on to discuss in the next section, are an unexpected breakdown in a stream, as interruptions in computational formalization. That is, in some senses, there is a failure to anticipate an event in the handling of a media stream (within computer science this is articulated as a failure to 'catch' an exception that was

'thrown' – a conceptual structure we explore in the next section).

A stream is a dynamic flow of information (for example, multi-modal media content). They are instantiated and enabled by code/software and a networked environment. Streams are becoming part of digital media ecology as media increasingly are delivered via streaming platforms – called real-time streams. However, the real-time stream is not just an empirical object, it also serves as a technological imaginary, and points to a potential direction of travel for new computational devices and experiences. That is as "a real time, flowing, dynamic stream of information — that... users and participants can dip in and out of and whether we participate in them or simply observe we are... a part of this flow" (Berry 2011: 143). For example, on the night of the 2012 US Presidential election, Twitter recorded 31 million election-related tweets from users of the streaming news service (which contained certain key terms and relevant hashtags) and election-related tweets at 327,452 tweets per minute (TPM) (Twitter 2012).

In real-time stream ecology, the notion of the human is contested/constructed as radically different to the 'deep attention' of previous historical periods. Indeed, the user is constantly bombarded with data from a thousand (million) different places, all in real-time, and requiring complementary technologies to manage and comprehend this flow and to avoid information overload. This is increasingly understood as a lack within human capabilities to be remedied using more technology – real-time streams need visualisation, cognitive assistants, push notification, dashboard interfaces, and so forth. This has become a gap in which the memory industries have positioned themselves to fill with new products and services. As N. Katherine Hayles (1999) states, "modern humans are capable of more sophisticated cognition than cavemen not because moderns are smarter... but because they have constructed smarter environments in which to work" (Hayles 1999: 289).

Bernard Stiegler has begun a useful project for mapping and critiquing the infrastructural requirements, institutions, and economies of computationality. To do this, he makes a number of productive moves to develop categories for thinking through the computational; for him, this is deeply connected to a project

of grammatization, remembrance and cognition. For example, he introduces the notion of primary, secondary and tertiary retentions to understand how the human and the technical are linked through activities of practical life, consciousness and memory. The primary retentions are concerned with the present; that is, with the not yet of memory, as phenomena given to the senses and perception; the secondary retentions are concerned with the past, that which is not perceived, but is given by human memory; finally, the tertiary retentions, are retained by a mnemonic function – mental and behavioral flows that can be made discrete and materialized in cultural production. He writes:

> Primary retention is that which is formed in the very passage of time, as the course of this time, such that, as a present which passes, it is constituted by the immediate and primordial retention (the 'primary retention') of it's own passing. Becoming past, this passage of the present is then constituted as secondary retention, that is, as all those memorial contents [*souvenirs*] which together form the woven threads of our memory [*mémoire*]... Tertiary retention is a mnemotechnical exteriorialization of secondary retentions which are themselves engendered by primary retentions (Stiegler 2009: 8-9).

Once human culture exists as tertiary retentions, and has this material form, it resides in an extra-somatic fashion. In other words, it becomes cultural artifacts such as books, paintings, sculpture and recorded sounds. This ability to exteriorialize our memories in order to create a sphere of culture, as it were, maintains the remembrance and education of generations. This enables possible conditions for our complex societies, which are built on this material memory, and allows for historical consciousness to emerge. There is not enough space here to present the complexities of Stieger's work, but we now want to focus on his notion of the 'memory industries' to provide a rich concept for thinking through the new aesthetic in tandem with imaginary museums. FIG.5

We can think of Google as the quintessential memory industry corporation in, for example, Google's internal notion of its

general Internet 'footprint.' For Google, "being number one in search is fine, but not sufficient. In its goal to own the semantic universe, taking over 'territories' is critical. In that context, a 'territory' could be a semantic environment that is seen as critical to everyone's daily life, or one with high monetization potential" (Filloux 2012). The imperialist imperative to capture all aspects of everyday life is implicated in the drive of computationality to transform all things into computational forms. In order to do this, Google and other corporations, seek to grammatize, encode, store, aggregate and distribute code-objects that stand-in for, or represent, other objects. In some instances, these code-objects come to replace their referent forms – for instance, film, television, and music recordings are increasingly stored within digital formats and their analog carriers discarded.

Computational devices and systems also enable assemblage of new social ontologies and the corresponding social epistemologies that we have increasingly grown to take for granted in computational society, including Wikipedia, Facebook and Twitter – we might say new social forms *enmediated* by the computational (Berry 2012a). The extent to which digital devices, and the computational principles on which they are based and from which they draw their power, have permeated the way in which we use and develop knowledges in everyday life is astounding, if we had not already discounted and backgrounded its importance. For example, see Zax (2011) for the extent to which computational methods like n-gramming are being utilized to decode everyday life. The ability to call up information instantly from a mobile device, combine it with other data streams, subject it to debate and critique through real-time social networks, and then edit, post and distribute it worldwide would be incredible if it had not already started to become so mundane to us.

In fact, a much-heralded 'Age of Context' is being built upon the conditions of possibility supported by distributed computing, cloud services, smart devices, sensors and new programming practices around mobile technologies. This emergent paradigm in computing stresses the importance of connecting up multiple technologies that provide data from real-time streams and APIs (Application

Programming Interfaces) to enable a new kind of intelligence within these systems. A good example is given by 'Google Now,' a product which attempts to think 'ahead' of the user by providing algorithmic prediction based on past user behavior, customized preferences, search result histories, smart device sensors, geolocation, and so on. As they explain:

> Google Now gets you just the right information at just the right time. It tells you today's weather before you start your day, how much traffic to expect before you leave for work, when the next train will arrive as you're standing on the platform, or your favorite team's score while they're playing. And the best part? All of this happens automatically. Cards appear throughout the day at the moment you need them (Google 2012b).

These new contextual technologies form a constellation that creates new products and services, new tastes and desires, and the ability to make an intervention into forethought – what Google calls "Augmented Humanity" (see Eaton 2011). In some senses this follows from the idea that after "human consciousness has been put under the microscope, [it has been] exposed mercilessly for the poor thing it is: a transitory and fleeting phenomenon" (Donald, quoted in *Thrift* 2006: 284). The idea of augmented humanity and contextual computing are intended to remedy this 'problem' in human cognitive ability. Here the technologists are aware that they need to tread carefully as Eric Schmidt, Google's ex-CEO, revealed, "Google policy is to get right up to the creepy line and not cross it" (Richmond 2010). The 'creepy line' is the external product line at which the public and politicians think that a line has been crossed into surveillance, control and manipulation by capitalist corporations – of course, internally Google's experimentation with these technologies is potentially much more radical and invasive – there is no such creepy line within the corporation that limits technological experimentation. These new technologies need not be as dangerous as they might seem at first glance, and there is no doubt that the contextual computing paradigm can be extremely useful for users in their busy lives – acting more like a personal assistant

than a secret policeman. Israel (2012) argues that this new Age of Context is made possible by the confluence of a number of competing technologies. He writes that contextual computing is built on, [1] social media, [2] really smart mobile devices, [3] sensors, [4] Big Data and [5] mapping. We argue that the confluence of these five forces creates a perfect storm whose sum is far greater than any one of the parts.

It should, therefore, hardly come as a surprise that code/software today is a key mediator between ourselves and the world we encounter, disconnecting the physical world from a direct coupling with our physicality, whilst managing a looser softwarized transmission system. Called 'fly-by-wire' in aircraft design; in reality, fly-by-wire can be thought of as the condition of the calculative media environment we increasingly experience – as computationality – with digital devices augmenting our perception and cognitive forethought to such an extent as to shape the very possibility of human thought in contrast to previous constructions of the Enlightenment self. That is, through the very creation of a repository of memory itself, and the cognitive processing of what are now huge databases and archives of personal and cultural entities, stored in servers around the globe, creates a new co-constructed individual on-the-fly.

As Stiegler argues, "memory is always the object of a politics," and combined with the industrialization of memory, he writes:

> Today more than ever the political question is memory, in that it is industrialization itself that raises the question of selection, of pre-judgments, of the criteria of both judgment and the resultant decisions to be made in the possible beyond of the real itself, technoscience no longer constatively describing the real's existence but rather performatively exploring and writing about the new possibilities to be found there (Stiegler 2009: 21).

Stiegler's notion of the memory industry also points towards the becoming-database of culture, since it provides a way of representing and mediating the world through the digitally encoded form that is understandable as an infinite archive (or collection). This

creates not only digital repositories but also the possibility of plug-in memory for individuals through dashboards, notification centers, real-time streams and digital-asset management services – of what Tim Maly (2012) calls the 'corporate-readable world.' Like Malraux's imaginary museum, it also creates the conditions of possibility for new ways of seeing, new aesthetics of archives viewable through the mediation offered in software and code. Aggregation, collections, mash-ups, remixes and cultural remembrance served up through computational devices that offer instant-on, autocompleted, augmented, aesthetic outputs to problems we had not even been given a chance to question. This is an issue of media aesthetics that we now turn to in the next section.

CHAPTER FOUR

NEW AESTHETIC REGIME

To even mention aesthetics in relation to digital and networked media – to the kinds of memory industries and technological imaginaries described in the previous chapter – is already asking for trouble. As a particular domain of philosophical thought and reflection, aesthetics has been mobilized over time by a wide range of questionable political programs and agendas. Indeed, its use as a conceptual framework to legitimate and de-legitimate particular practices, assertions or ideologies has been a topic of intense debate. The term, accordingly, has had a 'checkered career' throughout modernity, from materialist understandings of embodiment to aristocratic theories of sensibility and neo-Kantian containment strategies of irrationality or contingency. Reflecting on such constructs, Raymond Williams would insightfully observe, "the form of this protest, within definite social and historical conditions, led almost inevitably to new kinds of privileged instrumentality and specialized commodity," whilst adding, "the humane response was nevertheless there" (1977: 151).

Given these histories, the notion of a new aesthetic, unsurprisingly, can lead to a mire of indignation from artists, theorists and critics; or more likely, a blanket dismissal of the naivety of invoking such problematic and complex lineages. In our view, however, it can be convincingly argued that the new aesthetic also contains a kind of provocative ambiguity, a productive emptiness, which ironically speaks to the convolutions of meaning characteristically linked to and associated with an aesthetic regime of experience and sense-making.

One way to consider this is through the work of Jacques Rancière, where aesthetics has characteristically been defined by a fundamental confusion between 'heteronomy' and 'autonomy,' or the desire for the integration of creativity into the everyday and the irreducibility of this activity to means/ends relations. Within this schema,

art is always defined as something more than itself, since artworks are simultaneously removed from politics and located within its sphere of influence by forever holding out the possibility of another world.

This is also how aesthetic gestures are capable of being politically deployed. Consider, for instance, the diverse claims for the new aesthetic as a space of contestation and confusion, such as endorsements of object-oriented-ontology (OOO), claims that the term is largely ignorant of new media theory and even its possibility of being leveraged by creative 'thought-leaders' in the pursuit of lucrative markets (Bogost, 2012; Biggs, 2012; Pearson 2012). These seemingly contradictory perspectives arise with network cultures, so that the significance of the new aesthetic becomes both an expression of a struggle to creatively explicate computational infrastructures of the everyday and a debate over what this might mean in terms of socio-political formations.

However, despite the discourses on the post-human that have been attached to the term, it should be obvious that these contestations ultimately converge on a profoundly humanist set of concerns. That is, they are centered on questions of collective agency, technical action and interfaced communication. Nevertheless, differing conceptions of technological aesthetics continually unfold across this terrain, implicating understandings of design and computational thinking which, as Florian Cramer observes, tends toward a logical assessment of functional elegance, "thus reiterating both classical 18th century categories of aesthetic judgment and, on a larger historical horizon, Pythagorean and Platonist ideas of the transcendence of beauty in mathematics, arts (music) and cosmology" (2011: 121). These conditions of computationality beauty carry a series of difficult issues for classical notions of politics and critical thought; they are settings in which the new aesthetic allows us certain opportunities to reflect on computational sense- making.

In Curt Cloninger's sardonic description, "the New Aesthetic image is like outsider art incidentally created by systems" (2012). Indeed, we need to recognize how the significance of the technical stuff accumulated by the term new aesthetic extends well beyond a philosophy of art. Rather, it suggests broad reflection on the

infrastructural settings of informationalism and how these systems invoke problems for processes of socio-political mediation at large. Thus the curatorial function of the new aesthetic is based on collectively documenting the uncanny failures of computation as it scales into increasingly ubiquitous configurations: tagging, posting, tweeting and categorizing incongruities in computationality. In the context of memory industries, such activity transforms what Siegfried Zielinski once described as "fortuitous finds" (2006). The archive is now the database, or better yet, the Cloud. There is, therefore, an obvious irony in the fact that new aesthetic images, events, objects and texts strive to reflect on media abstractions while recirculating content for social platforms and building active audiences for new enclosures.

In this way, the artifacts mapped by the new aesthetic are profoundly caught up with capitalist realities and neoliberal governmentalities. Here, the significance of the new aesthetic as a collective style fixated on the eventfulness of error-activated systems is symptomatic. While apparently opening onto a more-than-human experience, it also becomes an archive for the inhuman logics of a corporate readable world in states of malfunction, following Maly:

> For a glimpse of the corporate readable world, look to Twitter's routinely useless 'who to follow' panel, Klout's laughable ideas about what you are influential about, Facebook's clumsy attempts to get you to join a dating site, and Google's demented, personalized, Gmail ads. You can see it in your credit rating, and your position on the actuarial tables. You can see it in Blackwater / Xe / Academi's attempt to conceal itself by shedding names like a trickster god shedding skins (Maly, 2012).

We might consider moments of dislocative media, the a-rationality of algorithms or the conservative tendencies of fault-tolerance as either aligned and disjoined with modes of informational capitalism. But let us be careful not to celebrate these failures without also drawing out the motivations and pleasures of cataloging corporate disasters to begin with. Besides the fact that these kinds of breakdown provide opportunities for further

profit-seeking and economic error-correction, simple re-circulation suggests another problematic iteration of what Malraux called the imaginary museum.

There is a risk in the desire for infinite archivization as it makes new grand styles visible and throws singular creativity into question. As we pour more of our lives into social platforms and link up the history of cultural production, the social unit of our neoliberal societies - the individual - buckles and breaks apart into what Gilles Deleuze memorably described as 'the dividual' (1992). These fragments are treated as resources; they flow by in a deluge of real-time streams, cascading into repositories for memory industries.

Re-circulatory dynamics are threaded into the intelligibility of cultural production. Here, art is no longer categorical, nor exploratory, but 'recreative' (Reynolds, 2012). We no longer believe in the figure of the individual genius, but easily accept the power of objects and nonhuman agencies. Our Museum-Without-Walls, therefore, might benefit from heeding Malraux's dilemma in the wake of technical reproducibility, but now expedited by computationality:

> Once we know that the very essence of creation is a break with the past, art links up with history, so to speak, in reverse. Indeed the history of art, so far as genius is concerned, is one long record of successive emancipations, since while history aims merely at transposing destiny on to the plane of consciousness, art transmutes it into freedom (Malraux, 1978: 623).

Any reinstantiation of such autonomy today requires consideration of the circulation of value and waste through digital and networked technologies. If the new aesthetic is a technological imaginary tied to both memory industries and creative industries, then it indicates how the production of exceptional events and heterogeneous temporalities are now key concerns of creativity. And here, 'convenience' and 'exception-handling' provide opportune frames of reference for critical thinking.

Intrinsic to the performativity afforded by computation are

approximations. Interfaces are sculpted ergonomically, including the calculation of correct solutions within finite timings – indeed, a great amount of money is expended on web analytics to shape the web to the desires of its consum/users. Users also accommodate their behavior to the predilections of the computational, including inadequacies such as lack of functionality, frames, filters or lag. Users might entertain the impulse of their desires to the interface, and a gratified or frustrated experience depends on whether their concession is redeemed. These are desires which cannot be afforded by the computational experience, they either atrophy or distract; what remains can elaborate points of departure, antagonisms, conflicts and critiques.

Convenience for users is a mantra of digital memory industries. Taking the root 'convene' (to meet) this goal contains both economic and cybernetic resonances. With convenience, there is approximation. As long as things are consistently brought together, we enjoy the performative excellence and resilience of systems. The convenience of automated systems is what we receive in return for restructured labor forces, and redirected workflow. As long as computationality can withstand fault-tolerance, then we may no longer notice that expertise and embodied knowledge are being expropriated through 'coercive paternalism' (Metahaven, 2012). There are moments of grace where the functionality of the machine seems to merge with our intentionality. We behold the world through this experience of convenience, and anticipate seamless connectivity.

Exceptions nevertheless routinely occur within computational processes. These exceptions often go unnoticed across crisis-ridden composition of digital and networked infrastructures. Graceful-failure and fault-tolerance are built into these socio-technical ensembles. One might think of interrupts in the redirection of a functioning CPU, or more tellingly, when a program enters into an 'unlikely' scenario or moment of logical indecision. These are states of computational exception; historically they have been dealt with by traps (Hardy, 2002). To put this another way, computationality always involves a certain deferral or handling of precariousness; for Chun, "crises do not arguably interrupt programming,

for crises – exceptions that demand a suspension, or at the very least an interruption of rules or the creation of new norms – are intriguingly linked to technical codes or programs" (2011: 99). Chun points to a need to understand how computation in this respect supports a deferral of decision-making that renders "everything and thus nothing a crisis" (106). One way to extend her insightful analysis further, however, is to consider how traps are transferred, registered and analyzed to avoid fatal errors, or to facilitate debugging. To fully grasp, however, the socio-political and cultural significance of graceful degradation requires some understanding of extrogeneous and endogenous settings for computationality. That is, it requires a theorization of how the eventfulness of computation unfolds within wider socio-technical assemblages and milieus.

The equanimity of a computer algorithm, for instance, can produce cultural effects that have a sly appeal. This is especially the case for those individuals directly entangled up with those computational processes. Algorithms, of course, are executed with a particular purpose in mind, but they are easily reworked for other purposes, like when a JPG file is read by a text editor or vice versa. Algorithms might first arise as a description of activity required to successfully attain a goal, and translated into programs, for instance, as methods and functions; but then this might still result in unexpected upshots. As Andrew Goffey puts it, "algorithms act, but they do so as part of an ill-defined network of actions upon actions, part of a complex of power- knowledge relations, in which unintended consequences, like the side effects of a program's behavior, can become critically important" (2008: 19). In this case, programs might run in infinite loops, work through pointless computations, or generate unexpected errors that can lead to more systemic problems.  FIG.6

Algorithms are somehow always inadequate, despite their purported formal consistencies. Crucially, the inadequacies of the algorithm are not merely computational, but resonate across socio-cultural contexts. The software for Google Earth, for instance, suffers from notable insufficiencies in the composition of seamless planetary topologies for desktop navigation and tourism. As Clement Valla's archival project Postcards from Google Earth reveals,

weird aberrations occur as freeways and highways are continuously collapsed into rendering processes for terrain and landforms. Apple Maps similarly displayed the telltale glitches of computational assumptions about the layout of the physical world, with impossible topologies and bizarre gaps in its mapping.

We might also consider selective auto-linking on 18th century manuscripts in the Google Books project, such as *Galeeren in Engelland mit Galleotten* by Johann Andreas Graf, published in 1700, where the ornate imagery of historical documents clash with bright blue hyperlinks to presumed accidentally related pages (see Art of Google Books 2012). These are moments of socio-technical dissensus where algorithms fail to meet certain expectations – or sometimes even to exceed them. All this requires error-correction of some kind, even if this involves crafting solutions manually – for example, with Google Maps which requires extensive customization and exception handling (Madrigal 2012). They are identified as nonstandards through discursive, stylistic, formal or other epistemological frameworks that are extrogeneous in many ways to computation proper. In this respect, the general desperation of inadequate systems produces charming, but also potentially critical malfunctions.

There are also specific interventions to create glitches and failures, whereby a computational system is probed to find cracks and fissures in the code that allows it to be exploited in particular ways. This can be linked to political projects, like the attacks carried out by Anonymous on Swedish government websites in October 2012 – for example, on Sweden's central bank, the Riksbank, whose website was taken down and suffered a five-hour-long blackout (Grundberg and Rolander 2012). Or consider Stuxnet, a computer worm that was designed to attack the code in an Iranian uranium-enrichment facility at Natanz, Iran (Berry 2012c). Stuxnet was "intriguing because it is not a general purpose attack, but designed to unload its digital warheads under specific conditions against a specific threat target. It is also remarkable in the way in which it disengages the interface, the screen for the user, from the underlying logic and performance of the machine" – in other words the logic of the code was disconnected from the

visual feedback of the interface such that the "normal" observed by the users was, in fact, a deliberate "glitch" (Berry 2012c). We might also look at more surprising examples of hackers utilizing common methods through unconventional means, such as SQL code injection attacks via car license plates. Essentially, these work by supplementing the data that the computer experts extract from its camera input with extra SQL commands that are treated unproblematically as extra code. All of these examples show that computational systems agential processes remain open to specific assumptions and liminal zones which lay them open to disruption and hacking, and which can produce interesting and unusual glitches and effects.  FIG.7

Dislocative media is another instance of tracking these liminal zones as they converge on the production of space. In this case, temporal-spatial suspensions occur in strategies of coordination, way finding or getting one's bearings gets interrupted. Here, we might consider James Bridle's publication *Where the F*ck Was I?* (2011), an 'artist' book that documents and visualizes iPhone tracking through consolidated.db, including glitchy moments or outliers in location algorithms; moments that can be recognized as impossible approximations. These techniques are widespread throughout media arts, like Julian Oliver's *Border Bumping* (2012) project by that over-identifies with the calculative operations of cellular telecommunications infrastructure to disrupt the formal consistency of national borders. That is, if a user location is logged in a bordering country, then territories are redrawn on the terms of computationality:

> As we traverse borders our cellular devices hop from network to network across neighboring territories, often before or after we ourselves have arrived. These moments, of our device operating in one territory whilst our body continues in another, can be seen to produce a new and contradictory terrain for action (Oliver 2012).

From another perspective, we can also consider the contestation of borders through translations of hacker practice. In this case,

the widely-celebrated work *Borderxing Guide* (2001-11) by Heath Bunting that strives to interrogate systems and then log exceptions in the securitization of nation states. With the aim of advancing aesthetic constructs and frameworks for the computational, each of these instances might be considered in alternate terms of interruptions and trapping. That is, they are techniques for categorizing, extending or opening out exceptionality, or for re-routing fault-tolerance into alternative transductive formations. FIG.8

To be clear, we are not advocating approaches that claim a Romantic posture towards failure and technical glitches. There are clear limits, moreover, to how far fault- tolerance might be theorized for critical and creative acts. Certainly, we are also enamored with experiences of computational convenience and recognize the necessity for infrastructural efficiencies. However, there is a desperate need for access to socio-political problems as computationality is mobilized by informational capitalism in crisis-prone manifestations. Sabotage, in this respect, might be provocatively considered in Veblenian terms as the imposition of non-democratic solutions, a moment of locking-down potential sources of computational differentiation, even at the expense of efficiencies in order to maintain profitability and control.

In this case, instances of DRM (Digital Rights Management) and corporate black-boxing become strategies of entrapment that close off the possibility of a collective articulation of problems. For Deleuze, these configurations work in terms of Majoritarian politics or molar thought whereby:

> The master sets a problem, our task is to solve it, and the result is accredited true or false by a powerful authority. It is also a social prejudice with the visible interest of maintaining us in an infantile state, which calls upon us to solve problems that come from elsewhere, consoling or distracting us by telling us that we have won simply by being able to respond (Deleuze, 2001: 158).

For Alexander R. Galloway (2011), moreover, the notion of the black box is linked to operations of power within what he calls 'cybernetic societies' such that hiding mechanisms of the state,

becomes itself a technical means of control by obscurity. This is a 'specific kind of invisibility', a *blackness* that "is not simply an effect of cybernetic societies but is in fact a necessary precondition for them" (239). Here, knowledge is utilized to drive modes of economic and market-based contest without access to how problems for politics are determined, without the right to problems or, more explicitly, without a capacity for a problematization of problems. This is one set of interrupting the present that has developed on the terms of these new archival technologies that might be radicalized as a domain for alternate modes of computational sense-making, including a sense of how to handle problems differently – or even, how to generate problems that are simultaneously artistic, critical and anti-positivist.

CHAPTER FIVE

CONCLUSION

Mapping out the implications of computationality for an imaginary museum, more so in terms raised explicitly and implicitly by the new aesthetic, inevitably raises more questions than answers. Indeed, the very issues that inspired Malraux in his formulation of the imaginary museum now appear timelier in terms of the possibilities opened up by computational technologies. Even though Malraux often spoke of the imaginary museum in the singular, he clearly also had in mind some kind of temporality, multiple instantiations of, or developments in and of imaginary museum(s) created by technical reproduction. He wrote:

> Not that these works on entering our Museum without Walls will disclaim history – as did the classical works when they entered the official museums of the recent past. Rather, they still link up with history, though precariously (the link is sometimes snapped); their metamorphosis, though infusing new life into history as well, does not affect it to the same extent as it affects the works of art themselves... It is in terms of a world-wide order that we are sorting out, tentatively as yet, the successive resuscitations of the whole world's past that are filling the first Museum without Walls (Malraux 1978: 127).

The ability to position works in relation to each other, to make what today we would call a distant reading of past art, he identified as *style*. In this sense, style becomes an aggregated sense of the aesthetic practices, representation or affect of a definite historical period. This corporate sense of an assemblage, as it were, was directly addressed by Malraux in terms of what he called an 'imaginary super-artist.' He explains:

> Thus it is that these imaginary super-artists we call styles, each

> of which has an obscure birth, an adventurous life, including both triumphs and surrenders to the lure of the gaudy or the meretricious, a death-agony and a resurrection, come into being (Malraux 1978: 46).

This is, of course, a lived issue today with the question of computational readings of works from the past managed through massive archival databases, image processing and text analysis using statistical algorithms. Where photographic reproduction served as a frame of compression for Malraux, taking a sculpture and flattening it onto a surface, computational processing discretizes entities into shards, which might be pixel-based, geometric, mathematical or multimedia fragments, themselves 'compressed' into a new format, or as we would say today, another medium. This new database of fragments, in reality code-objects, can then be aggregated, processed, transformed and recombined into new things, which can then be subject to further calculative processes, visualizations and re- presentations. Here, we are thinking of Lev Manovich's work and his notion of cultural analytics, reading cultural production from afar (Manovich 2007).

Culture, and the production of art is, for Malraux, linked to a humanistic notion of the Kantian ideal of the Enlightenment, using notions such as 'humanistic heritage,' an 'international heritage,' and so on (Malraux 1978: 591). His distinction between a 'strongly developed culture,' that is one which has an 'exemplary picture of a man as a totality', and a Plutarchian one, that is a 'weak' culture where only 'exemplary elements of a man' are recorded. Today we are less likely to make these kinds of judgments on the cultural production of the other, as it were. Although the idea of self-education linked to maturity continues to have resonance with the Kantian idea of societies in maturity and immaturity analogous to individuals (Kant 2009: 2), an ideal that remains important today and has been revisited by Stiegler (2010) in relation to the *pharmakon* as represented by the memory industries and computation. Malraux argues that this ability to create collections in new media forms, and by this he means photographs, is potentially transformation:

> Alongside the museum a new field of art experience, vaster than any so far known (and standing in the same relation to the art museum as does the reading of a play to its performance, or hearing a phonograph record to a concert audition), is now, thanks to reproduction, being opened up. And this domain – which is growing more and more intellectualized as our stock-taking and its diffusion proceeds and methods of reproduction come nearer to fidelity – is for the first time the common heritage of all mankind (Malraux 1978: 46).

Interestingly, the common heritage of all humankind has in the past been used interchangably with the 'province of all humankind,' but today, increasingly, 'common heritage' is taken to refer to 'material objects', while 'province' refers to activities and use (see Gabrynowicz 1992: 692). Malraux's use chimes with this distinction in its reliance on the production of material objects, in this case, photographic reproductions, which can be hosted in the imaginary museum. The question of what can and what cannot be put into the imaginary museum then, is linked to the materiality of the medium used for its instantiation. The imaginary museum becomes a culturally reflective project of the drive towards a computer- readable world.

The status of the human and the questions it raises are deeply embedded within such a discussion, which, whilst conceptualized in terms of the notion of the creative artist asserting her freedom against that of 'Fate,' are also implicit in the loss of autonomy, or perhaps, humanity forgetting its distinctively human potentials and qualities. For Malraux, one of the dangers latent in the imaginary museum is that in its overview of the whole of human cultural production – one no longer identifies human creation in the particular – and instead sees only the *meso* level of the group or the culture. Malraux calls this style and we might think of this as patterns – or as a cumulative heap of culture held in the imaginary museum. Humanism and its particularity, whilst remaining central to Malraux's discussion, also has tensions, as Darzins explains:

> The dilemma of humanism vs. non-humanism pervades much of *The Voices of Silence*. To the extent that the hidden *telos* of the work is the rejection of humanism, it moves toward a destruction of aesthetics. Integrated in the imaginary museum, the most heterogeneous art forms do not become objects of 'aesthetic experience,' but loom large as witnesses to bygone cultures. *Aisthesis* – the enjoyment of a sensuous form as an end in itself – no longer counts, and the cultivation of the 'plastic mind' (the term is I. A. Richards') is rejected in favor of the contemplation of a rigid, tragic *écriture*. With ascetic patience, the imaginary museum seems to be awaiting the moment when it will be transposed from the realm of the imaginary into a cultural world and when its *écriture* will merge with an authentic collective style. (Darzins 1957: 113).

This resonates with the pervasive posthumanism that inhabits certain conceptions of the new aesthetic, in the idea of 'seeing like a machine,' or that, in some way, we (the humans) are being observed by them (computers), whether understood developmentally, as is sometimes the case in Bridle's discussions of 'teaching' the machine, or in terms of 'creepy' surveillance technologies linked to a politics of the new aesthetic in others (see Bridle 2011b). But it is also there in the logic of closed feedback loops and the difficulty of monitoring the activities of calculative machines, even when they are visual, only where visuality is explicitly non-human visualization for non-human 'eyes.' All this can generate an apathetic attitude to the expansion of computationality; that is, it is presented for the sake of merely documenting and describing this 'education' of the machines, even contributing to their 'learning,' but we are ultimately powerless to do anything about it – indeed, we can only 'wave' at the machines. As Bridle writes:

> The machines aren't very smart yet, but we're teaching them this stuff all the time. We're giving them eyes and ears and we're giving them access to our world. We're sharing our social spaces with them increasingly... Unfortunately, because of the way we're building things, that has bad consequences now,

> because we have a bad view of these things. We're building them for the wrong reasons. We're talking to them in the wrong ways, and it's encouraging them in the wrong directions. But if we could speak to them better, if we could speak to them more clearly, if we could start to share the world and see it a little as they do, then maybe they'll start to see it a little as we do (Bridle 2011b).

The imaginary museum is an extremely rich concept that elaborates on this notion of the new aesthetic in interesting ways. There are fascinating parallels between photographic reproduction of Malraux's imaginary and the computational media of today. We have touched upon a number of these trajectories; further plots could easily be charted. Certainly, we could reflect further on the new aesthetic as a grand style, or the current tendency to think of patterns and recreativity against the singular of the creative agent, whether human or non-human, that we are also submitting the artist to the calculation of the machine, to the memory industries described by Stiegler – whereby the artist then returns as the exception, a glitch.

Computational media explicitly surpasses the affordances of previous media forms, and provides for potentially unlimited conceptualization of the imaginary museum, not only in terms of its instantiations, but its reworkings, appropriations, links, histories and contents. In terms of the new aesthetic, digital media points towards imaginary museums, the pluralization of the concept, within which new aesthetics could also find its place.

HOW THIS WAS WRITTEN

This article was created in a 3.5 day book sprint by 3.5 participants (one was sick for a day). The process involved a type of 'theory sprint' – bringing together free flowing narratives informed by Malraux's 'Imaginary Museum' and Bridle's 'New Aesthetic Tumblr.' Kristoffer Gansing introduced Malraux to the group at the beginning of the first day. We worked through the Russian and German texts available to us and used the Amazon 'Look Inside' feature to research Malraux in English three pages at a time. Reflection on a previous booksprint, *New Aesthetic, New Anxieties*, and the attempt to situate the new aesthetic within a wider theoretical, social, cultural and economic context drove the discussion and writing in this project. The new aesthetic was known to half the group (David M. Berry and Michael Dieter) as they had been involved in a previous book sprint on this topic. Baruch Gottlieb and Lioudmila Voropai also joined the adventure. Adam Hyde facilitated. The book sprint process involves a lot of discussion and exploration which is captured into textual form usually in book form although presented here as a book within a book.

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Images

FIG 1
Glitch Airplane flying over Hyde Park Chicago IL
from Google Maps (Atlantic 2010)

FIG 2
Malraux creating his musée imaginaire

FIG 3
'The Museum Without Walls'

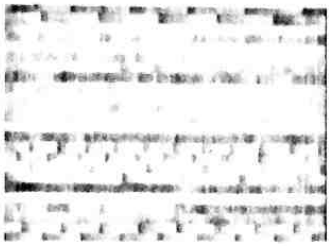

FIG 4
Disturb by Alexandra Roozen
Google Maps (Atlantic 2010)

FIG 5
From #Glitch == error curated by Rosa Menkman,
collected from Google Street View by Stallio

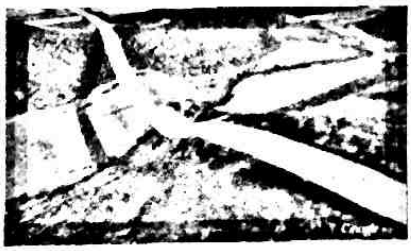

FIG 6
Google Earth - The Universal Texture (Valla 2012)

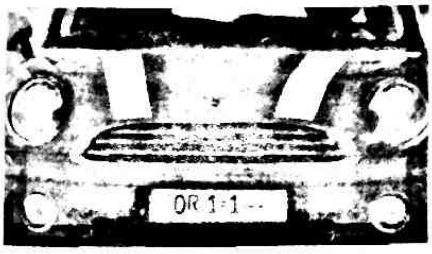

FIG 7
Hackeando Code Injection Attack (Areino 2008)

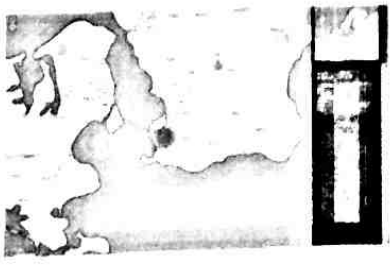

FIG 8
Julian Oliver, Border Bumping (2012)